

WHAT IS CLAIMED IS:

- 5 1. A local drug delivery apparatus comprising:
 a medical device for implantation into a treatment site of a
 living organism;
 at least one agent in therapeutic dosages releasably
 affixed to the medical device for the treatment of reactions by the
 living organism caused by the medical device or the implantation
 thereof; and
 a material for preventing the at least one agent from
 separating from the medical device prior to implantation of the
 medical device at the treatment site, the material being affixed to
 at least one of the medical device or a delivery system for the
 medical device.
- 10
- 15 2. The local drug delivery apparatus according to Claim 1, wherein
 the medical device comprises an intraluminal medical device.
- 20 3. The local drug delivery apparatus according to Claim 2, wherein
 the intraluminal medical device comprises a stent.
- 25 4. The local drug delivery apparatus according to Claim 1, wherein
 the at least one agent comprises an anti-proliferative.
5. The local drug delivery apparatus according to Claim 1, wherein
 the at least one agent comprises an anti-inflammatory.
6. The local drug delivery apparatus according to Claim 1, wherein
 the at least one agent comprises an anti-coagulant.
- 30 7. The local drug delivery apparatus according to Claim 1, wherein
 the at least one agent comprises an immunosuppressant.

8. The local drug delivery apparatus according to Claim 1, wherein the at least one agent comprises a non-viral gene introducer.

9. ~~The local drug delivery apparatus according to Claim 1, wherein the material for preventing the at least one agent from separating from the medical device comprises a lubricious coating.~~

10. ~~The local drug delivery apparatus according to Claim 9, wherein the lubricious coating is incorporated onto the medical device.~~

11. The local drug delivery apparatus according to Claim 9, wherein the lubricious coating is incorporated into the medical device.

12. The local drug delivery apparatus according to Claim 9, wherein the lubricious coating is incorporated onto the delivery system for the medical device.

13. The local drug delivery apparatus according to Claim 9, wherein the lubricious coating comprises a silicone-based material.

14. ~~The local drug delivery apparatus according to Claim 1, wherein the material for preventing the at least one agent from separating from the medical device comprises a water soluble powder.~~

15. ~~The local drug delivery apparatus according to Claim 14, wherein the water soluble powder is incorporated onto the medical device.~~

16. The local drug delivery apparatus according to Claim 15, wherein the water soluble powder comprises an anti-oxidant.

17. The local drug delivery apparatus according to Claim 15, wherein the water soluble powder comprises an anti-coagulant.

18. A local drug delivery apparatus comprising:
a medical device for implantation into a treatment site of a living organism;
at least one agent in therapeutic dosages releasably affixed to the medical device for the treatment of reactions by the living organism caused by the medical device or the implantation thereof, the at least one agent being incorporated into a polymeric matrix; and
a material for preventing the at least one agent from separating from the medical device prior to implantation of the medical device at the treatment site, the material being affixed to at least one of the medical device or a delivery system for the medical device.
19. The local drug delivery apparatus according to Claim 18, wherein the medical device comprises an intraluminal medical device.
20. The local drug delivery apparatus according to Claim 19, wherein the intraluminal medical device comprises a stent.
21. The local drug delivery apparatus according to Claim 20, wherein the polymeric matrix comprises ethylene-co-vinylacetate and polybutylmethacrylate.
22. The local drug delivery apparatus according to Claim 20, wherein the polymeric matrix comprises ethylene-co-vinylacetate and polybutylmethacrylate.
23. The local drug delivery apparatus according to Claim 20, wherein the material for preventing the at least one agent from separating from the medical device comprises a lubricious coating.

24. The local drug delivery apparatus according to Claim 23, wherein the lubricious coating is incorporated onto the surface of the polymeric matrix.

5 25. The local drug delivery apparatus according to Claim 23, wherein the lubricious coating is incorporated into the polymeric matrix.

26. The local drug delivery apparatus according to Claim 23, wherein the lubricious coating is incorporated onto the surface of the delivery system for the medical device.

27. The local drug delivery apparatus according to Claim 23, wherein the lubricious coating comprises a silicone-based material.

15 28. A local drug delivery apparatus comprising:
a medical device for implantation into a treatment site of a living organism;
at least one agent in therapeutic dosages releasably affixed to the medical device for the treatment of reactions by the living organism caused by the medical device or the implantation thereof, the at least one agent being incorporated into a polymeric matrix; and
a material for preventing the polymeric matrix from adhering to itself when parts of the medical device make contact with one another.

29. The local drug delivery apparatus according to Claim 28 wherein the medical device comprises an intraluminal medical device.

30 30. The local drug delivery apparatus according to Claim 29 wherein the intraluminal medical device comprises a stent.

31. The local drug delivery apparatus according to Claim 30 wherein the material for preventing the polymeric matrix from adhering to itself comprises a water soluble powder.

5 32. The local drug delivery apparatus according to Claim 31 wherein the water soluble powder is affixed to the surface of the polymeric matrix.

10 33. The local drug delivery apparatus according to Claim 32 wherein the water soluble powder comprises an anti-oxidant.

34. The local drug delivery apparatus according to Claim 32 wherein the water soluble powder comprises anti-coagulant.

15 35. A drug delivery device comprising:
a medical device for implantation into a treatment site of a living organism; and
therapeutic dosages of one or more anti-proliferatives, one or more anti-inflammatories, one or more anti-coagulants, and
20 one or more immunosuppressants releasably affixed to the medical device for the treatment of reactions by the living organism caused by the medical device or the implantation of the medical device at the treatment site.

25 36. The drug delivery device according to Claim 35, further comprising therapeutic dosages of modified genes via one or more non-viral gene introducers releasably affixed to the medical device.

30 37. The drug delivery device according to Claim 36, further comprising a material for preventing the therapeutic dosages releasably affixed to the medical device from separating from the medical device during delivery and implantation of the medical device at the treatment

site, the material being affixed to at least one of the medical device or a delivery system for the medical device.

38 The drug delivery device according to Claim 37, wherein the material for preventing the therapeutic dosages releasably affixed to the medical device from separating from the medical device comprises a lubricious coating.

39. The drug delivery device according to Claim 36, further comprising a polymeric matrix into which the therapeutic dosages are incorporated.

40. The drug delivery device according to Claim 39, further comprising a material for preventing the polymeric matrix from adhering to itself when parts of the medical device make contact with one another.

41. The drug delivery device according to Claim 40, wherein the material for preventing the polymeric matrix from adhering to itself comprises a water soluble powder.

42. A method for maintaining agents on a medical device during implantation into a treatment site of a living organism comprising:
releasably affixing one or more agents in therapeutic dosages to the medical device;
treating one of the medical device or the delivery device with a material for preventing the one or more agents from separating from the medical device during delivery and implantation of the medical device at the treatment site; and
loading the medical device into a delivery device.

43. The method for maintaining agents on a medical device during implantation according to Claim 42, wherein the step of releasably

affixing one or more agents comprises incorporating the agents in at least one polymer and coating the medical device with the at least one polymer.

5 44. The method for maintaining agents on a medical device during implantation according to Claim 43, wherein the step of treating one of the medical device or the delivery device comprises coating the at least one polymer with a lubricious material.

10 45. The method for maintaining agents on a medical device during implantation according to Claim 43, wherein the step of treating one of the medical device or the delivery device comprises coating the delivery device with a lubricious material.

15 46. The method for maintaining agents on a medical device during implantation according to Claim 43, wherein the step of treating one of the medical device or the delivery device comprises incorporating a lubricious material into the polymer.

20 47. The method for maintaining agents on a medical device during implantation according to Claim 43, wherein the step of treating one of the medical device or the delivery device comprises coating the at least one polymer with a water soluble powder.

25 48. A method for maintaining agents on a medical device during implantation into a treatment site of a living organism comprising:

 releasably affixing one or more agents in therapeutic dosages to the medical device by incorporating the one or more agents in at least one polymer;

30 treating the medical device with a material for preventing the polymer from adhering to itself when parts of the medical device make contact; and

 loading the medical device into a delivery device.

49. The method for maintaining agents on a medical device during implantation according to Claim 48, wherein the step of treating the medical device comprises coating the at least one polymer with a water soluble powder.

5

50. A method for maintaining agents on a medical device during implantation into a treatment site of a living organism comprising:

coating at least a portion of the medical device with a primer layer;

10

coating the primer layer with a first polymer layer including cross-linking moieties;

cross-linking the first polymer layer to the primer layer; and

releasably affixing one or more agents in therapeutic dosages to the medical device by incorporating the one or more agents in at least one polymer, the polymer being similar in chemical composition to the first polymer.

15

51. The method for maintaining agents on a medical device during implantation according to Claim 50, wherein the step of releasably affixing one or more agents comprises layering the at least one polymer onto the first polymer layer using a solvent that swells.

20

ADD
BY